

What is claimed is:

1. A mobile station having radio channels being set  
between the mobile station and a plurality of base stations,  
and performing communication with the plurality of base  
stations in a communication condition such that one base

station selected among the plurality of base stations

transmits a user data signal which transmission power is

controlled; and that the plurality of base stations

including the selected base station transmit signals

including a control data signal which transmission power

is controlled in a similar way as the user data signal;

said mobile station comprising:

a measurement section measuring, on a basis of each

base station, a quality of the control data signal

transmitted with the transmission power controlled;

a selector selecting the base station transmitting the

user data signal, based on the quality of the control

data signal from each base station measured in the

measurement section; and

a transmitter transmitting identification

information for identifying the base station selected by

the selector, to the plurality of base stations.

2. The mobile station according to claim 1, further  
comprising:

a generator having preset target quality, and  
comparing the target quality with the quality of the base

station selected by the selector among the quality sets  
measured by the measurement section, generating power  
control information instructing to decrease the  
transmission power in case of the latter having better  
5 quality than the former, and instructing to increase the  
transmission power in case of the former having better  
quality than the latter.

3. The mobile station according to claim 1 or 2,  
10 wherein the measurement section measures the signal  
quality with a signal-to-interference power ratio.

4. The mobile station according to claim 1 or 2,  
15 wherein the measurement section measures the signal  
quality with a reception power.

5. The mobile station according to claim 1, further  
comprising:

a generator generating power control information  
20 indicating how the transmission power of the plurality of  
base stations is to be controlled, based on the quality  
of the base station selected by the selector among the  
quality sets measured by the measurement section,

wherein the transmitter stores the identification  
25 information and the power control information generated  
by the generator into each time slot in a frame having a  
plurality of time slots, and transmits the identification

information and the power control information to the plurality of base stations.

6. The mobile station according to any one of claim 1 to 5,

wherein the plurality of base stations communicate with the mobile station using W-CDMA, and the user data signal is a dedicated physical data channel signal, and the measurement section measures the quality of a dedicated physical channel control signal.

7. A base station having radio channels being set between the base station and a mobile station, transmitting a user data signal which transmission power is controlled to the mobile station only when the base station of interest is selected by the mobile station, and transmitting, to the mobile station, signals including a control data signal which transmission power is controlled in a similar way

as the user data signal, irrespective of whether or not the mobile station of interest is selected, said base station comprising:

a receiver receiving identification information transmitted from the mobile station, representing the base station which is selected by the mobile station based on the quality of the control data signal transmitted with the transmission power controlled; and

a transmitter transmitting the user data signal to

the mobile station only when the identification information represents the base station of interest.

8. The base station according to claim 7,  
5 wherein the receiver further receives power control information determined by the mobile station based on the quality of the control data signal, indicating how the transmission power is to be controlled, and wherein said base station further comprises a power controller, which controls transmission power of both the user data signal and the control data signal, based on the power control information received by the receiver.  
10 9. The base station according to claim 8, wherein, when the identification information represents the base station of interest, the power controller controls to increase the power in case of the power control information instructing increase of power, and to decrease the power in case of the power control information instructing decrease of power, whereas when the identification information does not represent the base station of interest, the power controller controls to increase the power in case of the power control information instructing increase of power, and maintains the present  
25 power in case of the power control information instructing decrease of power.

10. The base station according to claim 9,  
wherein a power increment when the identification  
information represents the base station of interest equals  
to a power increment when the identification information  
5 does not represent the base station of interest.

11. The base station according to claim 8,  
wherein, when the identification information  
represents the base station of interest, the power  
10 controller controls to increase the power in case of the power  
control information instructing increase of power, and  
to decrease the power in case of the power control  
information instructing decrease of power, whereas when  
the identification information does not represent the base  
15 station of interest, in case of the power control  
information instructing increase of power, the power  
controller controls to increase the power with a smaller  
increment than the increment of when the identification  
information represents the base station of interest, and  
20 in case of the power control information instructing  
decrease of power, the power controller controls to  
decrease the power with a smaller decrement than the  
decrement of when the identification information  
represents the base station of interest.

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12. The base station according to claim 8,  
wherein, when the identification information

represents the base station of interest, the power controller controls to increase the power in case of the power control information instructing increase of power, and to decrease the power in case of the power control information instructing decrease of power, whereas when

the identification information does not represent the base station of interest, the power controller controls to maintain the present power in case of the power control information instructing either increase or decrease of power.

13. A mobile communication system having a plurality of base stations and a mobile station, with radio channels being set between the plurality of base stations and the mobile station, in which a user data signal is transmitted with transmission power controlled to the mobile station from one base station selected among the plurality of base stations, and control data signals, which transmission power is controlled in a similar way as the user data signal,

are transmitted to the mobile station from the plurality of base stations including the selected base station,

wherein said mobile station comprises:

a measurement section measuring quality of the control data signal on a basis of each base station;

25 a selector selecting the base station transmitting the user data signal, based on the quality of the control data signal from each base station measured in the

measurement section; and

a. transmitter transmitting identification information for identifying the base station selected by the selector to the plurality of base stations,

5 and each plurality of base stations comprises:

a transmitter transmitting the user data signal to the mobile station only when the identification information transmitted from the mobile station represents the base station of interest.

10 14. A communication method for a base station among a plurality of base stations, with radio channels being set between the plurality of base stations and a mobile station, performed in a communication condition such that

15 a user data signal which transmission power is controlled is transmitted to the mobile station from one base station selected among the plurality of base stations, and that control data signals, which transmission power is controlled in a similar way as the user data signal, are transmitted to the mobile station from the plurality of base stations including the selected base station, said communication method comprising:

receiving identification information, transmitted from the mobile station, representing the base station which is selected by the mobile station based on the quality of each control data signal with the transmission power controlled; and

when the identification information represents the base station of interest, transmitting the user data signal

with the transmission power controlled, and also

transmitting the control data signal with the transmission

power controlled, whereas when the identification

information does not represent the base station of interest,

transmitting the control data signal with the transmission

power controlled, without transmitting the user data.

10 15. A communication method for a base station among

a plurality of base stations, with radio channels being

set between the plurality of base stations and a mobile

station, performed in a communication condition such that

a user data signal which transmission power is controlled

15 is transmitted to the mobile station from one base station

selected among the plurality of base stations, and that

control data signals, which transmission power is

controlled in a similar way as the user data signal, are

transmitted to the mobile station from the plurality of

20 base stations including the selected base station,

wherein said mobile station:

measures quality of the control data signals on a basis

of each base station;

selects the base station transmitting the user data

25 signal, based on the measured quality of each control data

signal transmitted from each base station; and

transmits identification information for identifying



the selected base station, to the plurality of base stations,

and wherein said each plurality of base stations:

when the identification information transmitted from

5 the mobile station represents the base station of interest,

transmits the user data signal which transmission power is controlled based on the power control information transmitted from the mobile station; and also transmits the control data signal with the transmission power controlled; whereas when

10 the identification information does not represent the base station of interest, transmits the control data signal with the transmission power controlled, without transmitting the user data.

15 16. A mobile station performing communication with a plurality of base stations, comprising:

a measurement section measuring, on a basis of each base station, quality of control data signals which are

transmitted from the plurality of base stations and

20 addressed to the mobile station of interest and which transmission power is controlled;

a selector selecting a base station transmitting a user data signal addressed to the mobile station of interest, based on the quality of the control data signals which are  
25 addressed to the mobile station of interest and measured in the measurement section; and

a transmitter transmitting identification

information for identifying the base station selected by the selector, to the plurality of base stations.

17. A base station performing communication with a mobile station, comprising:

a receiver receiving identification information transmitted from the mobile station, representing the base station which is selected based on quality of control data signals, which transmission power is controlled; and a transmitter when the identification information represents the base station of interest, transmitting with the transmission power controlled, both a user data signal addressed to the mobile station and the control data signal addressed to the mobile station, whereas when the identification information does not represent the base station of interest, transmitting the control data signal addressed to the mobile station with the transmission power controlled, without transmitting any user data addressed to the mobile station of interest.

18. A mobile communication system performing communication between a plurality of base stations and a mobile station,

wherein said mobile station:

measures quality of control data signals, which are transmitted with the transmission power controlled from the plurality of base stations and addressed to the mobile

station of interest, on a basis of each base station;

selects the base station transmitting a user data signal addressed to the mobile station of interest, based on the measured quality of the control data signals which

5 are transmitted from the plurality of base stations and

addressed to the mobile station of interest; and

transmits identification information for identifying

the selected base station, to the plurality of base

stations,

10 and wherein said base station:

when the identification information transmitted from

the mobile station represents the base station of interest,

transmits with the transmission power controlled, both the

user data signal addressed to the mobile station and the

15 control data signal addressed to the mobile station of

interest, whereas when the identification information does

not represent the base station of interest, transmits the

control data signal addressed to the mobile station of

interest with the transmission power controlled, without

20 transmitting any user data addressed to the mobile station

of interest.